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SOURCE Radio, No 4, 1951, p 17.LENINGRAD CONFERENCE ON PROBLEMS OF ACOUSTICS

The Acoustics Commission, Academy of Sciences USSR, recently held a conference in Leningrad on acoustics. More than 100 representatives of scientific-research organizations in Moscow, Leningrad, Kiev, Gor'kiy, Yaroslavl', and Molotov participated. Twenty-five reports and papers were read.

The first plenary session was given to the consideration of a number of theoretical problems, as well as the results of some experimental studies. The following reports were read: "Spectra and Analysis" by A. A. Kharkevich, Corresponding Member, Academy of Sciences, Ukrainian SSR; "Sound Analysis" by Prof A. V. Rimskiy-Korsakov; "Visualization of Space-Modulated Sound Waves" by Prof S. N. Rzhavkin; "The Theory of Total Reflection" by L. M. Brekhovskikh, Doctor of Physicomathematical Sciences; and "The Dissipation of Sound in Fluctuations" by L. A. Chernov, Candidate in Physicomathematical Sciences.

This session closed with a report by I. Ye. El'piner, Doctor of Biological Sciences, on "The Physicochemical and Biological Action of Ultrasonic Waves," in which he discussed the significance of new physical methods for the study of biological and medical problems.

Five reports were read in the section on piezoelectricity (chairman, N. N. Andreyev, Corresponding Member, Academy of Sciences USSR). Engr P. V. Anan'yev discussed the development of "piezoelectric measuring microphones." V. A. Krasil'nikov reported on "Results of Measuring Young's Modulus for Bars of Rochelle Salts Under Dynamic Conditions." V. P. Konstantinov gave an interesting demonstration of the oscillations of a piezoelectric resonator. Other reports were: "The Influence of Ultrasonic Waves on the Crystallization Process" by A. P. Kapustin and "The Domain Structure of Rochelle Salts Crystals" by M. A. Chernyshev.

Among the reports read in the section on electroacoustic equipment and measurements (chairman, I. Ye. Goron, Doctor of Technical Sciences were those of Engr M. A. Sapozhkov on "Some Methods of Measuring the Electroacoustic Parameters and Characteristics of Microphones, Telephones, and Laryngophones" and Engr I. M. Polkovskiy on "Application of an Instrument With a Thermistor to Measure Noise and Speech Levels". Engr A. I. Muratov reported on "A Universal Measuring Device to Test Electroacoustic Equipment."

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I. I. Slavin, Candidate in Technical Sciences, spoke on the development of "An Objective Noise Meter With a Loudness Scale" and demonstrated a small portable experimental model. Engr G. N. Stoykov demonstrated the first commercial model of the noise meter. Other reports read in this section were: "A Method of Measuring the Modulus of Elasticity and the Attenuation Factor of Materials" by Yu. M. Sukharevskiy, Doctor of Technical Sciences; "Equipment for Automatic Factory Checking of Microphones and Telephones" by A. N. Poloskin; and "Problems of Measuring the Microphone Effect of Carbon Powders" by Engr. V. N. Fedorovich. Fedorovich also read a report on "The Acoustic Method of Measuring Vibrations."

At the plenary session on the last day of the conference, two reports were read by S. Ya. Lifshits, Doctor of Physicomathematical Sciences, one on "Standardization of Measurements of the Threshold of Audibility" and the other on "The Discrete Property of Sensations." B. D. Tartakovskiy reported on "Transitional Sound Layers." The remaining two reports were on statistical acoustics.

Prof G. S. Gorelik's report on the subject "Some Problems of Statistical Regularities in Acoustics" showed that Soviet scientists have made great progress in the development of theoretical acoustics. In the discussion of this report, Ye. L. Faynberg, Doctor of Physicomathematical Sciences, and S. G. Gershman spoke extensively on their work in this field. V. A. Krasil'nikov reported on "The Effect of Atmospheric Turbulence on the Propagation of Sound."

The Commission plans that the next conference will be held this spring and will concern electroacoustic equipment. Two resolutions were adopted before the conference ended, the first on the production of piezoelectric measuring microphones and electroacoustic measuring equipment and the second relating to provisional specifications for mass-produced noise meters.

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